Automated Configuration Management System (ACMS)

Paperless Office IPT Meeting

19 May 99

Presented by:
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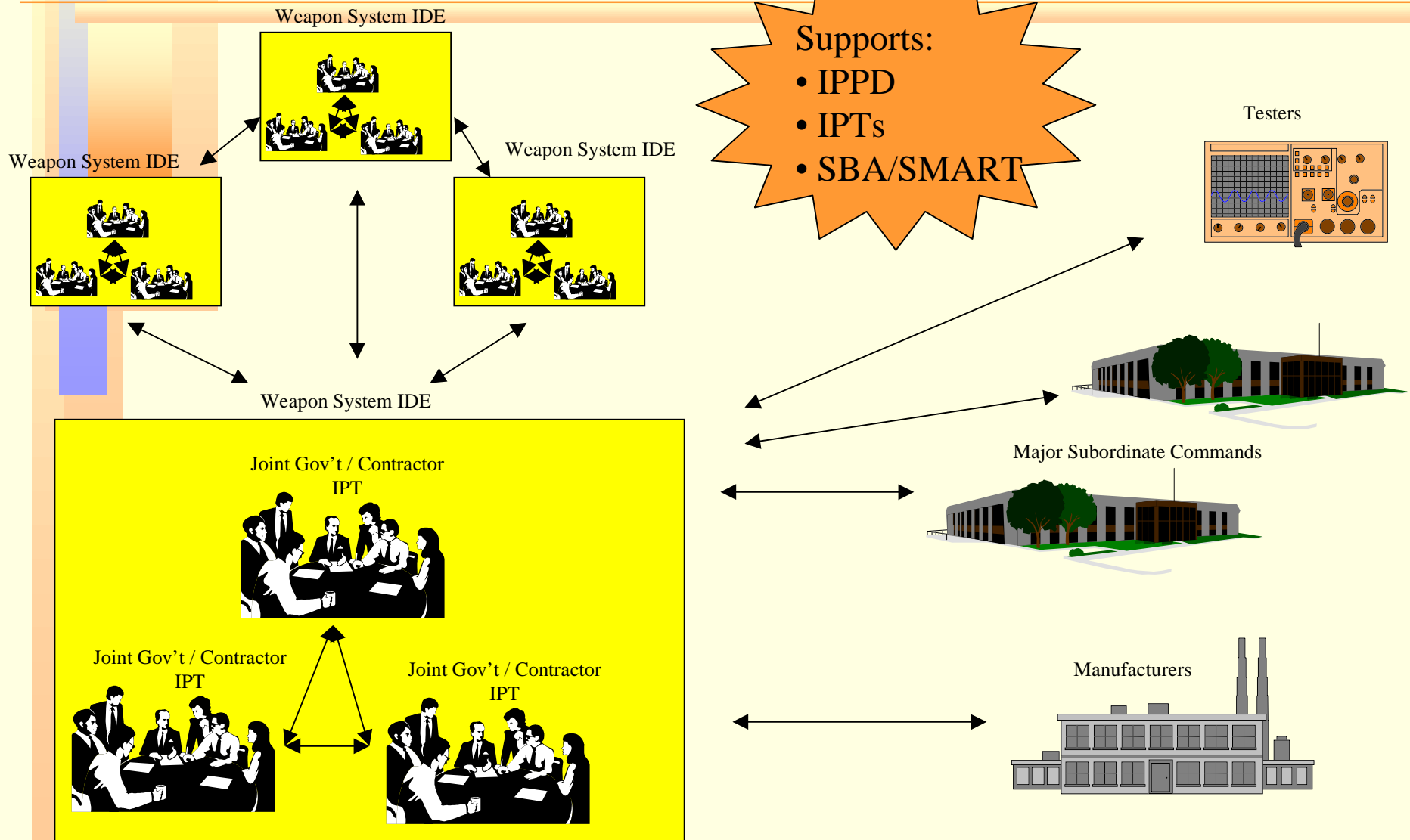AMSAA
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Briefing Outline

- Acquisition Reform Initiatives and Future Product Data needs
- Current Engineering Data Environment
- Review of ACMS and its status
- Importance of MIL-STD 2549 as a data exchange standard
- Request for assistance
- Suggested guidelines for ordering product data

OSD/Army Acquisition Reform Initiatives

- Integrated Product Teams (IPTs)
- Integrated Data Environment (IDE)
- Simulation Based Acquisition (SBA) (SMART)
- Contracting out of Item Management responsibility
  - Logistics support
  - Configuration management
  - Inventory control (spares reprocurement)

Army IDE of the Future

Weapon System IDE

Weapon System IDE

Weapon System IDE

Weapon System IDE

Supports:
- IPPD
- IPTs
- SBA/SMART

Testers

Major Subordinate Commands

Manufacturers

Joint Gov't / Contractor IPT

Joint Gov't / Contractor IPT

Joint Gov't / Contractor IPT

IDE Data

<u>Types of Data</u>

- Management Data
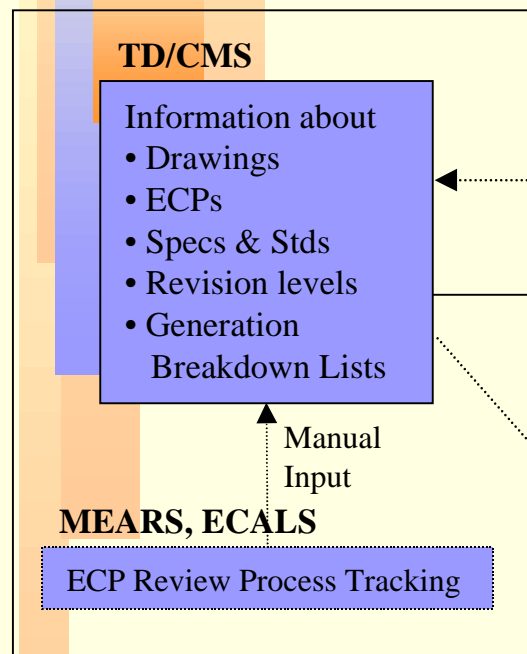- Financial Data
- **Product Data**
- Contract Data

- Drawings
- Reports
- Databases
- Software
- Engineering designs
- Analyses
- Models & Simulations
- Part / Material Info
- ECPs / Deviations
- Technical Manuals
- Configuration Mgmt Data
- Decision Documents
- etc.

Product Data = All the data related to a product's requirements, design, implementation, and support, <u>regardless of ownership</u>
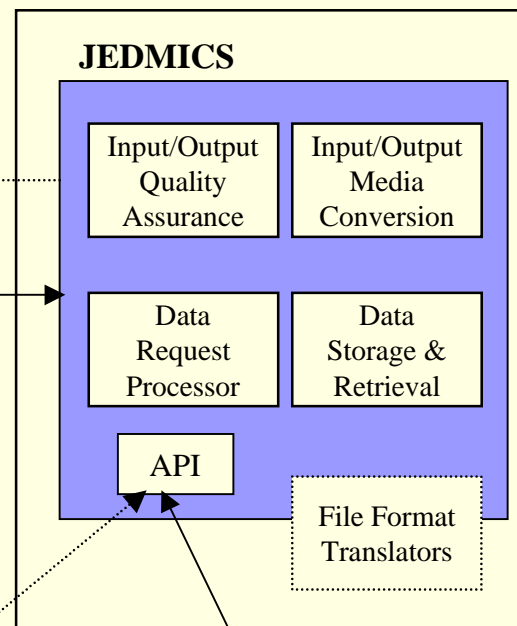
Current EDM Environment

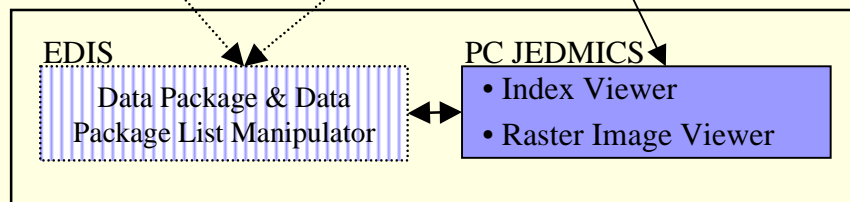**Data & Data Exchange Standards**

Configuration Management

Repository

TD/CMS

Information about
- Drawings
- ECPs
- Specs & Stds
- Revision levels
- Generation Breakdown Lists

CM Data manually loaded

Pull Tape

Manual Input

MEARS, ECALS

ECP Review Process Tracking

JEDMICS

Input/Output Quality Assurance	Input/Output Media Conversion

Data Request Processor	Data Storage & Retrieval

API

File Format Translators

EDIS

Data Package & Data Package List Manipulator

PC JEDMICS
- Index Viewer
- Raster Image Viewer

Direct User Access Tools

Key

- Commonly used Production Tool
- Not used widely in Production
- Entering into Production Environment

Analysis

- Current automated system (TD/CMS) can't handle all user needs.
- Army must switch from a "drawing" to "product" perspective.
- Army must provide access to all product data required (not just the two dimensional images of record) to support a product throughout its life cycle.
- Complete life cycle access to product data is only possible if the Army practices cradle to grave configuration management of product data.

AMC Initiative

Army Materiel Command (AMC) tasked the Engineering Data Management Systems (EDMS) Functional Coordinating Group (FCG) to prepare a Performance Specification for an Army standard automated configuration management system that would meet the Army's current and future needs.

ACMS Vision
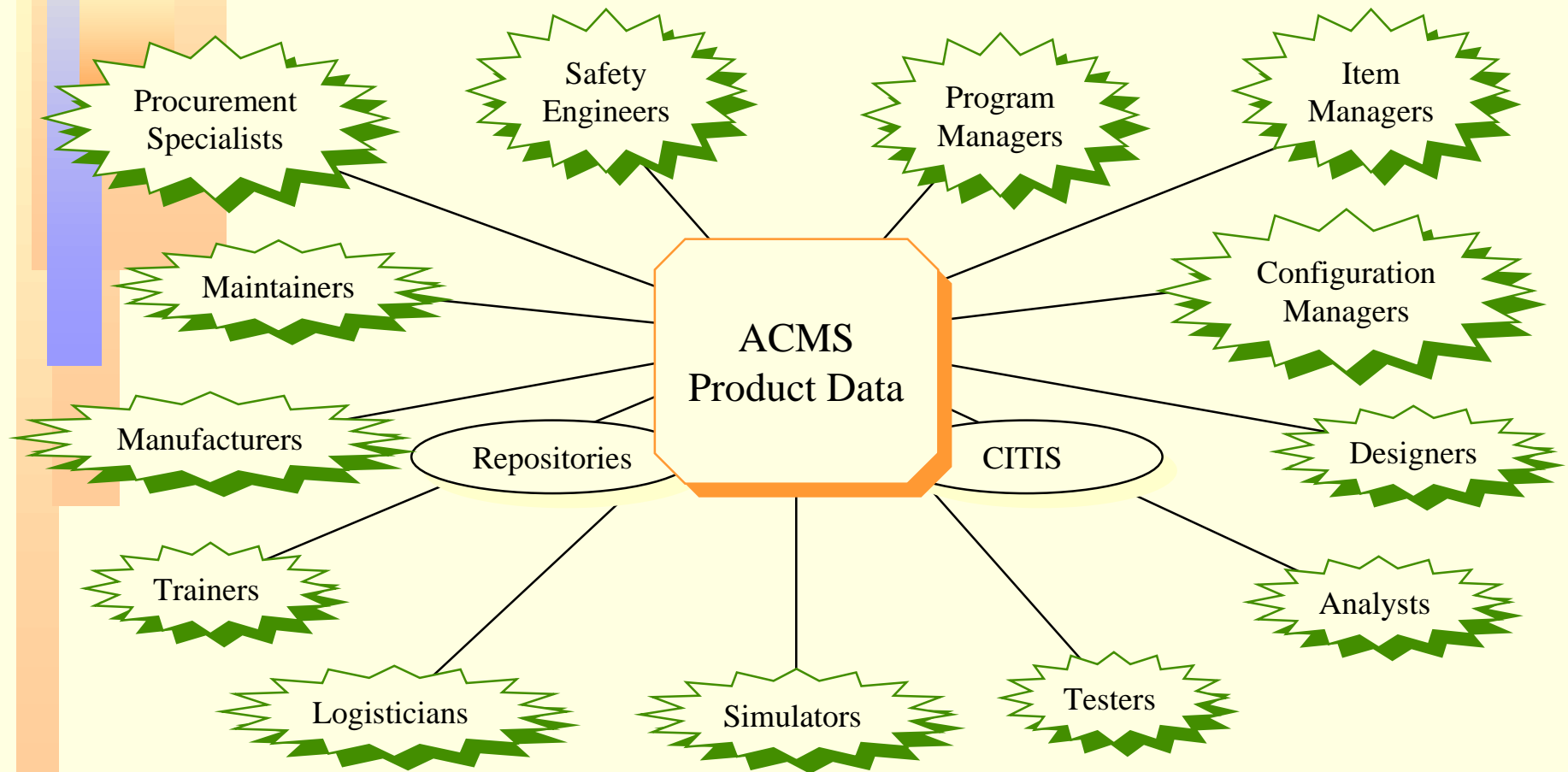
AMC Implementation Strategy

- Published the ACMS Performance Specification
- Continue to build customer and stakeholder support
- Establish Pilot Site at TACOM
- Seek funds for AMC wide implementation
- Revise and Use MIL-STD-2549 as a data exchange standard

MIL-STD-2549 Features

- Focuses on metadata for identity, relationship, version and retrieval attributes
- Accommodates any document, any file, any format as bucket of bits
- Transmits metadata and files or metadata alone
- Provides unique identity of documents, files, parts
- Identifies/controls multiple representations
- Clarifies data ownership issues
- Its data model and data element dictionary can be used as neutral basis for mapping different CM systems
- Mandated by JTA-A for Product Data Interchange

Request for Assistance

■ Need to answer the DOD question "Will the Army perform Configuration Management (CM) in the future?"

■ For each PEO and MSC, need the following table completed with the number of systems that fall into each category. Provide a table for today and your best guess at 5 years from now.

ACAT	No Gov CM "Com Item"	Shared CM "Perf Spec"	Total Gov CM "Detailed TDP"
I			
II			
III			
IV			

Suggested PM Guidance for Ordering Product Data

- ■ Today
  - When ordering product data, require its electronic delivery with its associated meta data in CDEX format

- ■ Near Term (after publication of MIL-STD-2549 Rev A)
  - When ordering product data, require its electronic delivery with its associated meta data in CDEX format and also consider obtaining the meta data as a MIL-STD-2549 Data Information Packet

- ■ Longer Term (after implementation of ACMS)
  - When ordering or acquiring access to product data, require its electronic delivery (data or instructions for access) with its associated meta data as a MIL-STD-2549 Data Information Packet

Summary

ACMS is an automated configuration management system that:

- Knows about <u>all</u> product related data
- Can accept and manipulate "intelligent" data and manage multiple product baselines
- Is compatible with Industry practices
- Provides a standard means for the delivery of digital product data (MIL-STD-2549)
- Supports Acquisition Reform objectives
- Allows for interoperability between IDEs
- Uses Commercial-off-the-Shelf technology

Visit the ACMS Web page

For additional information
and a copy of the
Performance Specification,
MIL-PRF-32029(MI)

www-iea.ria.army.mil/ai/eng_data/
acms/acms_frameset1.html

NOT
MEASUREMENT
SENSITIVE

MIL-PRF-32029(MI)
30 June 1998

PERFORMANCE SPECIFICATION

Automated Configuration Management System (ACMS)

This specification is approved for use by the Department of the Army and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers performance requirements for the U.S. Army's Automated Configuration Management System (ACMS). It defines the functional requirements for ACMS, interface characteristics, and the environment in which it must operate.

1.2 ACMS overview

1.2.1 ACMS purpose. The ACMS will provide the Army with a next-generation configuration management and product data management system. It will enable greater access to and sharing of enterprise product data[1] in support of Integrated Product Teams (IPTs); engineering change action processing; and reprocurement, operations, maintenance, and disposal activities. The primary enhancements ACMS will provide include the following:

   a. Storage and use. ACMS will extend the data types stored and managed, for example engineering models, simulations, and other forms of intelligent product data.

   b. Rapid retrieval. ACMS will enhance the user's ability to rapidly find, retrieve, and control access to product data.

[1] This performance specification uses the term "product data" to refer to all documents and metadata related to a product's requirements, design, implementation, and support. The term "document" has the same meaning as that used in MIL-STD-2549: A self-contained body of information or data which can be packaged for delivery on a single medium. Examples of documents include drawings, reports, standards, databases, application software, and engineering designs. "Metadata" are elements of information that describe data, such as document identifier, date, owner, release level, format, keywords, data location, approval authorizations, part identifier, and part name.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, U.S. Army Aviation and Missile Command, ATTN: AMSAM-RD-SE-TD-ST, Redstone Arsenal, AL 35898-5000, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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